

OIPE

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/040,315A

DATE: 07/24/2002 TIME: 11:25:15

Input Set : D:\seqlist.txt

Output Set: N:\CRF3\07242002\J040315A.raw

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4 <110> APPLICANT: Farese, Robert V.
  5
         Cases, Sylvaine
 6
         Smith, Steven
 7
         Erickson, Sandra
10 <120> TITLE OF INVENTION: Diacylglycerol O-Acyltransferase
13 <130> FILE REFERENCE: UCAL-105CIP2
15 <140> CURRENT APPLICATION NUMBER: 10/040,315A
16 <141> CURRENT FILING DATE: 2001-10-29
18 <150> PRIOR APPLICATION NUMBER: 60/107,771
19 <151> PRIOR FILING DATE: 1998-11-09
21 <150> PRIOR APPLICATION NUMBER: PCT/US98/17883
22 <151> PRIOR FILING DATE: 1998-08-28
24 <150> PRIOR APPLICATION NUMBER: 09/103,754
25 <151> PRIOR FILING DATE: 1998-06-24
27 <150> PRIOR APPLICATION NUMBER: 09/339,472
28 <151> PRIOR FILING DATE: 1999-06-23
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37 <213> ORGANISM: homo sapiens
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                                                                           120
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                                                                           180
    gcgggactgc tgctgcacgt ggccaacctg gccaccattc tgtgtttccc agcggctgtg
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    gtcttactgg ttgagtctat cactccagtg ggctccctgc tggcgctgat ggcgcacacc
                                                                           300
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                                                                           360
46 gccaaggctg cctctgcagg gaagaaggcc agcagtgttg ctgccccgca caccgtgagc
                                                                           420
47
   tacceggaca atetgaceta eegegatete tactaettee tettegeeee eacettgtge
                                                                           480
   tacgagetea aettteeceg eteteceege ateeggaage getttetget gegacggate
                                                                           540
   cttgagatgc tgttcttcac ccagctccag gtggggctga tccagcagtg gatggtcccc
49
                                                                           600
50
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                                                                           660
   ctcctgaagc tggcggtccc caatcacctc atctggctca tcttcttcta ctggctcttc
                                                                           720
   cactcctgcc tgaatgccgt ggctgagctc atgcagtttg gagaccggga gttctaccgg
                                                                           780
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   aagtggtgca tcagacactt ctacaagccc atgcttcgac ggggcagcag caagtggatg
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   gccaggacag gggtgttcct ggcctcggcc ttcttccacg agtacctggt gagcgtccct
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   ttcgtgggcc gctttttcca gggcaactat ggcaacgcag ctgtgtggct gtcgctcatc
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1200

RAW SEQUENCE LISTING

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85 geteteggeg teggaggace ggetegeggg titeegteea gggtggtagt		180
86 tagaagagga cgaggtgcga gacgcggctg tgagccccga cttgggcgcc		240
87 cgccggctcc ggctccggct ccagcccata cccgggacaa agacgggcgg		300
88 gcgacggcta ctgggatctg aggtgccatc gtctgcaaga ttctttgttc		360
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91 tggtgtctct gtttttgaag gacccctaca gctggcctgc cccatgcgtg		540
92 ccaatatttt tgttgtggct gcatttcaga ttgagaagcg cctggcagtg		600
93 cagageagat ggggetgetg ctacatgtgg ttaacetgge cacaatcatt	-	660
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95 catactccat catgttcctc aagctttatt cctaccggga tgtcaacctg 96 agcgaagggt caaggccaaa gctgtctcta cagggaagaa ggtcagtggg		780 840
97 agcaagctgt gagctatcca gacaacctga cctaccgaga tctctattac		900
98 ctcctacttt gtgttatgaa ctcaactttc ctcggtcccc cgcaatacga		960
99 tgctacgacg agttcttgag atgctctttt ttacccagct tcaagtgggg		1020
100 agtggatggt ccctactatc cacaactcca tgaagccctt caaggatatg	gactattcac	1080
101 ggatcattga gcgtctctta aagctggcgg tccccaacca tctgatctgg		1140
102 tetattggtt tttccactcc tgtctcaatg ctgtggcaga gettctgcag		1200
103 gcgagttcta cagagattgg tggaatgctg agtctgtcac ctacttttgg		1260
104 atateceegt geacaagtgg tgeateagae acttetaeaa geetatgete		1320
105 gcagcaaatg ggtggccagg acaggagtat ttttgacctc agccttcttc 106 tagtgagcgt tcccctgcgg atqttccgcc tctgggcatt cacagccatg		1380
106 tagtgagegt teceetgegg atgtteegee tetgggeatt caeageeatg 107 teceaetgge etggattgtg ggeegattet tecaagggaa etatggeaat		1440 1500
108 gggtgacact catcattggg caaccggtgg ctgtgctcat gtatgtccac		1560
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112 <210> SEQ ID NO: 4		
113 <211> LENGTH: 629		

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Input Set : D:\seqlist.txt

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114 <212> TYPE: DNA
     115 <213> ORGANISM: arabidopsis thaliana
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     118 <221> NAME/KEY: misc_feature
     119 <222> LOCATION: (0)...(0)
     120 <223> OTHER INFORMATION: Each n residue at position 455, 464, 467, 475, 497, 500,
508,
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               514, 519, 536, 543, 544, 576, 583, 584 and 597 can be either a, c, g or t
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         atteatggga tttataatag aacaatatat aaateetatt gteaggaact caaageatee
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     126 tttgaaaggc gatcttctat atgctattga aagagtgttg aagctttcag ttccaaattt
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     127 atatgtgtgg ctctgcatgt tctactgctt cttccacctt tggttaaaca tattggcaga
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     128 gcttctctgc ttcggggatc gtgaattcta caaagattgg tggaatgcaa aaagtgtggg
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     129 agattactgg gagaatgtgg aatatgcctg tccataaatg ggatgggtcc gacatatata
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     130 ccttccccgt gcttgcgcac aaggattacc caaagacacc ccggccatta accattggct
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W--> 131 ttcccaagcc ccctggaggc ctttccatgg gccanggacc cggngtnccc tggcnggccc
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W--> 132 ttcaaagcaa agggggnttn cctggggnta aagntccang ggcccttggg gcccanccaa
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         Cys Leu Val Ile Ala Ala Asn Val Phe Ala Val Ala Ala Phe Gln Val
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    150
         Leu His Val Ala Asn Leu Ala Thr Ile Leu Cys Phe Pro Ala Ala Val
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         Val Leu Leu Val Glu Ser Ile Thr Pro Val Gly Ser Leu Leu Ala Leu
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                                              90
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         Met Ala His Thr Ile Leu Phe Leu Lys Leu Phe Ser Tyr Arg Asp Val
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    156
         Asn Ser Trp Cys Arg Arg Ala Arg Ala Lys Ala Ala Ser Ala Gly Lys
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                                      120
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         Lys Ala Ser Ser Val Ala Ala Pro His Thr Val Ser Tyr Pro Asp Asn
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    160
         Leu Thr Tyr Arg Asp Leu Tyr Tyr Phe Leu Phe Ala Pro Thr Leu Cys
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                              150
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    162
         Tyr Glu Leu Asn Phe Pro Arg Ser Pro Arg Ile Arg Lys Arg Phe Leu
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                                              170
    164
         Leu Arg Arg Ile Leu Glu Met Leu Phe Phe Thr Gln Leu Gln Val Gly
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    166 Leu Ile Gln Gln Trp Met Val Pro Thr Ile Gln Asn Ser Met Lys Pro
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Input Set : D:\seqlist.txt

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169		210					215					220			-10	
170	Ala	Val	Pro	Asn	His	Leu	Ile	Trp	Leu	Tle	Phe		Tvr	Trn	Leu	Phe
171	225					230					235		-1-	115	Deu	240
172			Cvs	Leu	Δsn		Val	Δla	C111	Τ.Δ.1		Gln	Dho	C137	Asp	
173	1110	001	Cyb	БСи	245	211u	VUL	niu	OLU	250	Mec	GIII	FILE	СТУ	255	AIG
174	Glu	Dho	TT TT	λνα		Trn	T rn	7 an	Cor		Con	1701	mh ∞	M	Phe	TT
175	Giu	FIIC	тут	260	кър	пр	ттр	ASII	265	GIU	261	Val	THE	_	Pne	ттр
176	Cln	Aan	Пъъ		т1.	Dwo	1701	mi a		m	C	T1-	3	270	pl	
177	GIII	ASII	275	ASII	116	PLO	Val			ттр	Cys	TTE		HIS	Phe	Tyr
	T	D		T	3	3	a 1	280		.	_		285	_	_,	
178	ьys		мет	ьeu	Arg	Arg		ser	ser	ьуs	Trp		Ala	Arg	Thr	GTA
179		290	_		_		295				_	300	_			
180		Pne	Leu	Ala	Ser		Phe	Phe	His	Glu		Leu	Val	Ser	Val	Pro
181	305			_		310					315					320
182	Leu	Arg	Met	Phe		Leu	\mathtt{Trp}	Ala	Phe	Thr	Gly	Met	Met	Ala	Gln	Ile
183					325					330					335	
184	Pro	Leu	Ala	\mathtt{Trp}	Phe	Val	Gly	Arg	Phe	Phe	Gln	Gly	Asn	Tyr	Gly	Asn
185				340					345					350		
186	Ala	Ala	Val	\mathtt{Trp}	Leu	Ser	Leu	Ile	Ile	Gly	Gln	Pro	Ile	Ala	Val	Leu
187			355					360					365			
188	Met	Tyr	Val	His	Asp	Tyr	Tyr	Val	Leu	Asn	Tyr	Glu	Ala	Pro	Ala	Ala
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190	Glu	Ala														
101	205															
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RAW SEQUENCE LISTING DATE: 07/24/2002 PATENT APPLICATION: US/10/040,315A TIME: 11:25:15

Input Set : D:\seqlist.txt

218	145					150					155		_	_		160
219	Glu	Gln	Ala	Gly		Leu	Leu	His	Val		Asn	Leu	Ala	Thr		Leu
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221	Cys	Phe	Pro		Ala	Val	Val	Leu		Val	Glu	Ser	ITe		Pro	Val
222				180				_	185	_	_			190		
223	Gly	Ser	Leu	Leu	Ala	Leu	Met		His	Thr	Ile	Leu		Leu	Lys	Leu
224			195					200					205		_	
225	Phe		Tyr	Arg	Asp	Val		Ser	\mathtt{Trp}	Cys	Arg		Ala	Arg	Ala	Lys
226		210					215	_			_	220	_			
227		Ala	Ser	Ala	Gly		Lys	Ala	Ser	Ser		Ala	Ala	Pro	His	
228	225					230					235					240
229	Val	Ser	\mathtt{Tyr}	Pro	_	Asn	Leu	Thr	Tyr	_	Asp	Leu	Tyr	Tyr		Leu
230				٠	245					250				_	255	
231	Phe	Ala	Pro		Leu	Cys	Tyr	Glu		Asn	Phe	Pro	Arg		Pro	Arg
232	_			260	_				265					270		_•
233	Ile	Arg	Lys	Arg	Phe	Leu	Leu	_	Arg	Ile	Leu	Glu		Leu	Phe	Phe
234	_		275	_	_			280					285			
235	Thr		Leu	Gln	Val	Gly		Ile	GIn	Gln	Trp		Val	Pro	Thr	Ile
236	_	290					295					300	_			
237		Asn	Ser	Met	Lys		Phe	Lys	Asp	Met	_	Tyr	Ser	Arg	TTE	
238	305	_	_	_	_	310			_	_	315	_	1	_	_	320
239	GLu	Arg	Leu	Leu	_	Leu	Ala	Val	Pro		Hls	Leu	ıте	Trp		шe
240				_	325	_,		_	_	330	_	- 1		- 1	335	_
241	Phe	Phe	Tyr	_	Leu	Phe	His	Ser		Leu	Asn	Ala	Val		GLu	Leu
242				340	_		a 1	D 1	345			m		350	0	Q1
243	Met	GIn	Phe	GTĀ	Asp	Arg	Glu		Tyr	Arg	Asp	Trp	_	Asn	ser	GIU
244	_		355	_	51. -	m	a 1	360		3	~1 -	n	365	77.2	T	m
245	ser		Thr	Tyr	Pne	тгр		ASII	ттр	ASI	ше		Val	HIS	гаг	тгр
246	G	370	3	TT -	Dh a	т	375	Dana	Va.	T	7	380	a1	Com	002	T 0
247	-	ire	Arg	HIS	Pne	390	гаг	PLO	мес	Leu	395	Arg	GTÄ	ser	ser	LуS 400
248	385	W-+	71-	7	mh		17. 1	Dha	T 011	71-		7 l a	Dho	Dho	TI d	
249	пр	мес	Ala	AIG	405	СТУ	Val	Pne	neu	410	ser	нта	Pile	rne	415	GIU
250 251	m	Т он	Val	Cox		Dro	T 011	7 ~~	Mot		7 200	T OIL	m-rn	λ1 a		Thr
251	тут	Leu	Val	420	vaı	PIU	ьеu	Arg	425	rne	Arg	Leu	115	430	rne	1111
253	C111	Mot	Met		Cln	т10	Dro	Tou		Trn	Dho	17 a 1	C1 17		Dho	Dho
254	СТУ	мес	435	нта	GIII	116	PIO	440	АТа	тър	FIIE	vai	445	AIG	FIIC	FIIC
255	Gln	C1 v	Asn	Тиг	Clv	λen	Δla		Va 1	Trn	T.011	Sar		Tlo	T1_	Clv
256	GIII	450	หอแ	ıyı	СТУ	non	455	лти	Vai	115	пси	460	пси	110	110	OLY
257	Gln		Ile	Δla	Va 1	T.011		ጥህጉ	Va 1	Иiс	Δsn		Ψvr	Va l	T.011	Δen
258	465	110	110	niu	Vul	470	1100	-1-	· u ·	1115	475	-1-	- 1 -	,	1100	480
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RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/10/040,315A

DATE: 07/24/2002 TIME: 11:25:16

Input Set : D:\seqlist.txt

Output Set: N:\CRF3\07242002\J040315A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the $\langle 220 \rangle$ to $\langle 223 \rangle$ fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 455,464,467,475,497,500,508,514,519,536,543,544,576,583,584

Seq#:4; N Pos. 597

VERIFICATION SUMMARY

DATE: 07/24/2002 PATENT APPLICATION: US/10/040,315A TIME: 11:25:16

Input Set : D:\seqlist.txt

Output Set: N:\CRF3\07242002\J040315A.raw

L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:420 L:132 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:480 L:133 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:540